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THE JOURNAL OF PHILOSOPHY

NEUTRALISM AND RADICAL EMPIRICISM

IF protests had power to alter prevailing climates of opinion, Professor Urban's vigorous attack upon "Modernism in Science and Philosophy"[1] would have ere this inaugurated changes hopefully awaited by some who have shared his perplexity and suspicion concerning certain recent and contemporary philosophical tendencies.

"Modernism," as used by Professor Urban, is a blanket term which covers many philosophies as disparate as Jamesonian pragmatism, Bergsonian intuitionism, and logical atomism. It means among other things a too hasty abandonment of once accredited norms and contempt for the type of mentality which saw in historic continuity of thought at least one condition of philosophic progress. "A too great readiness to accept the a-logical and the unmeaning as the deepest character of reality" has brought philosophy to the brink of the chaotic with suicidal compulsion. It can save itself, thinks Urban, only by "doing its first works over again. . . ."

It is a serious task with which to charge the philosophy of the future, involving, if it be necessary, the work of many minds and many years. As such it is mentioned here only because the calendric period in which philosophy lost its reckoning coincides, Mr. Urban seems to say, with the rise of Radical Empiricism.

Now the "Radical Empiricism" of James, introduced by his then unique conception of consciousness,[2] is by general agreement one important source of the subsequent "neutralism." Neutralism is still identified with the realisms and their exclusive emphasis upon analysis. The present paper, while envisaging the larger problem, Is there a type of neutralism that will accord due recognition to wholeness as well as to analysis? will confine itself principally to a situation revealed by the initial step of James' Radical Empiricism in so far as this affects the realist's neutralism.

In brief characterization of the latter, the term "neutralism" has been used to designate the doctrine of neutral entities which for two decades has played an important part in neo-realistic constructions and epistemological controversy. It is a type of epistemological monism which, as noted, has its origin with James, though referred by him to Mach, the term "neutral entity" being ascribed to H. M.

[1] *Journal of Philosophical Studies*, Vol. V (April, 1930), pp. 230–245.

[2] "Does Consciousness Exist?" this JOURNAL, Vol. I (1904), pp. 477–491.

Sheffer. The neutral entity itself, neither physical nor psychical except for the relational context in which it is held (to employ the earlier language of description) is an ultimate or pseudo-ultimate simple, an hypothetical last term reached by analysis. Professor Smart's designation of it as a "metaphysically postulated element conceived principally, it would seem, for the purpose of constructing reality out of bits,"[3] notices that feature of the prevailing neutralism which is chiefly provocative of the present discussion. For the initial processes of James' Radical Empiricism do not necessarily lead to the type of neutralism that is so generally associated with the pluralistically devised and analytically determined neutral entities of neo-realism. This must be the writer's apology for the reintroduction of concepts and viewpoints reminiscent of ways in philosophy now held in many quarters to be outmoded, and a second must also be offered for a brief postponement of the problem while certain tendencies are noted in explanation of its presence here.

While the trend of method is in most quarters prevailingly analytic in accord with the dominant tendency in science to emphasize discontinuities, counter-tendencies have in recent years multiplied. They are for the most part trivial and signify, many would say, a merely momentary shifting of emphasis in certain sciences that is not of special ontological or epistemological import. *Field, pattern, meaning, Gestalt* or *configuration, situation,* and the like innocent terms have for some time expressed laboratory findings in various fields all within the day's work of an analytic and—many would again say—strictly mechanistic program.

Nowadays one does meet more and more frequently the term "holistic" quite in dissociation from the constructions of General Smuts, and in this connection a report of the last International Congress of Philosophy may be cited. The session on mechanism and vitalism "made clear that the present trend of thought on this issue is toward neither of the old extremes, but toward a middle position which may be roughly identified with the 'holism' of General Smuts."[4] Recently the terms "situationism" and "naturalistic occasionalism"[5] have appeared as a partial concession to dualism, on the one hand, and emergence, on the other. Discontinuities which have been affecting the causal relation are beginning to be troublesome to the philosophies of pluralism and discontinuity. In the studies of wave mechanics and of the quantum theory the balance is pretty well maintained between continuity and discontinuity, particles appearing to behave as waves and waves as particles. Pos-

[3] "Professor Perry's Empiricism," this JOURNAL, Vol. XIX (1922), p. 575.

[4] Brand Blanchard: "The Seventh International Congress of Philosophy," this JOURNAL, Vol. XXVII (1930), p. 594.

[5] R. H. Dotterer: *Philosophy by Way of the Sciences. Passim.*

sibly, as Professor Northrop states, neither can be resolved into the other.[6]

Separately considered, such tendencies mean little or nothing, but in alignment appear suggestive. The Part-Whole problem has been receiving increasing attention, not only from the logician, but from the worker in various fields of science. It has been termed "a puzzle that concerns the very nature of scientific method."[7] to which may be added, the very nature of philosophical method. Thus it must affect also the concept of *neutrality* and the legitimacy of its derivation by the one-way street method of analysis.

In "The New Realism" and "The New Rationalism" and elsewhere in the literature of realism the Part-Whole problem underwent investigation. To the extent that the pluralistic program of realism and its one-sided doctrine of relations would permit, organic wholes determinative of parts were accorded place in the scheme. Still, an investigation that is chiefly a cataloguing or classification may neglect important features. At present the organic whole seems everywhere on the point of transcending the limits set for its legitimate exercise by the jealous guardians of analysis who fear that it can not be accorded its due without riotous consequences.

Writing "Towards a New Philosophy,"[8] Dr. Ph. Kohnstamm affirms that a Whole of this type "as something which is greater and richer than the sum of its Parts must be one of the tools of our new approach." Lloyd Morgan's emergent "as something more than the additive resultant of the constituents" and Whitehead's "organic conception of enduring patterns or wholes" afford instances of the newer perspectives in which wholes are beginning to recover the significant rôles they had lost with the decline of idealistic philosophy (which had recklessly hypostasized them as subjective entities) and the rise of Radical Empiricism which was largely responsible for that decline.

However, to the writer, at least, it remains a harassing question whether the concept of wholeness can ever be given its proper and sober methodological valuation without an experimental return to the concept of immediacy in search of some possibly neglected neutral medium in which whole-determinative-of-part and part-determinative-of-whole may be seen in other perspectives and perhaps in truer factual relations than at present. This is again the "larger problem," above noted, which, it is hoped, may justify discussion of certain obsolescent aspects of James' philosophy.

[6] F. S. C. Northrop: *Science and First Principles*, p. 241.

[7] W. A. Copeland: "An Instrumental View of the Part-Whole Relation," this JOURNAL, Vol. XXIV (1927), p. 97.

[8] *Journal of Philosophical Studies*, Vol. V (1930), p. 168.

II

First it may be well to inquire what we should mean by a "neutrality" concept and what conditions it should fulfill if it is to be genuinely neutral. Now by neutrality as applied, let us say, to human affairs we mean surely that one who is said to be neutral has adopted a certain attitude toward contending parties or interests. In other words, one is always neutral in respect to *something*. Professor Dewey called attention to this in an article on "The Concept of the Neutral in Recent Epistemology," at the same time distinguishing this, its "logical" use, from neutral as applied to ontological *stuff*. "In one sense," said he, "to call anything neutral means neutral *in a specified respect or reference;* that is with reference to the application of a particular set of alternatives."[9] But if neutral, even in this "logical" sense, "means neutral *in a specified respect or reference,*" neutrality is an active state (in the case of a person, an attitude).

Thus the neutral is not simply the nondescript; it is not utter "irrelevancy." It can hardly be said that a cat is neutral regarding the merits of prohibition or of the planetesimal *versus* the nebular theory, such matters being simply irrelevant to feline mentality. Moreover, the same individual who is neutral toward certain interests *in a definable respect* may be obviously far from neutral in other respects. Further, I see no reason why he may not be as biased and prejudiced as you please concerning the issues or interests in question. The one condition to be fulfilled (doubtless a difficult one in the latter circumstances) is, that his prejudices shall be held in such restraint that they shall affect in no slightest degree the precise differences which his gentleman's agreement has declared shall be held irrelevant. Being neutral in a certain respect, he is under bonds not to use his specified and limited neutrality to the prejudice of contending interests outside its sphere of application.

If the foregoing conception of neutrality as something positive and selective or discriminatory is justified, it has relevancy for certain criticisms that have been urged against James' historic conception, "a conception having presumably," Professor Dewey says, "certain affiliations with the contemporary conception of the neutral."[10] To this conception we now turn. In what follows we shall be concerned with those features of James' essay, "Does Consciousness Exist?" that appear to suggest a type of neutralism other than that imposed upon realism by the analytically determined entity which, as before said, issued in part from his constructions.

[9] This JOURNAL, Vol. XIV (1917), pp. 161–163.

[10] *Ibid.*, p. 162.

III

It will be recalled that in that essay James announced his slowly matured conviction that "consciousness" is "not an entity" but a function, "Experience" being "the one primal stuff" from which philosophy must make its start.

In those days the term "entity" did not usually possess in philosophy its present convenient and elastic connotation as "a colorless word for object,"[11] but retained an earlier ontological signification. Entities of the ontological substantive type were coming into ill repute. Many believed that the contending idealisms and materialisms had taken them too seriously, considering the doubtful status of their opposing claims and the derivation of these foci about which the opposing systems had revolved from the beginnings of Cartesian dualism—if not from early culture when animism was pitted against the dawning recognition of objective uniformities. However, it was hardly suspected that these entities owed their disputed ontological status to relational contexts, or (to borrow from its usual context a convenient term) frames of reference. The various monisms and panpsychisms of the day, neglectful alike of scientific method and idealistic motif, had sought compromise by clapping together the physical and psychical in some remote mind-stuff.

By declaring that the supposed heterogeneity of thoughts and things is to be explained as an affair of relations James cut the Gordian knot which neither the idealisms and materialisms, full-circling toward one another from opposite foci, nor the mediating panpsychisms had been able to unloose. Opposing (Old Style, as we shall call them) entities, such as thought and thing, consciousness and object, cancelled out, or seemed to do so. By what may be termed a Cartesian return to immediate experience James cut beneath the dualistic presuppositions that underlay most of the philosophies of nearly three centuries and, to employ a critical-realistic and behavioristic slogan of the following decade, had "wiped the slate clean."

Here we may pause for a moment to note one or two of the many criticisms that have been passed upon James' apparent legerdemain. *Was* it a trick, though in sincerity performed,—"this short and easy method for disposing of dualism"? Professor Lovejoy, writing of James in *The Revolt Against Dualism*, seems to think so, the point being that "the logical truism that a thing [e.g., 'the one identical room' of James' illustration which may belong to either of two contexts] may without contradiction belong to two classes," affords no solution, no cogent argument against dualism.

[11] E. S. Brightman, *An Introduction to Philosophy*, p. 384.

"We may always entertain, in advance of inquiry, the hypothesis that a thing known to have certain properties or relations, *abc*, may be numerically identical with a thing which is otherwise known to have certain other properties, *xyz*. But identity is not even possible unless the attributes *abc* are compatible with *xyz*" (p. 46).

It does not seem to me that James would object to this. But more is involved than bare numerical identity. If in one's epistemology there lurks a pre-Jamesian ontological prepossession, *S*, which affects both sets of properties, *abc* and *xyz* according to the import that the *S* may retain, the cancellation of *S* from *S*(*abc*) and *S*(*xyz*) will leave *abc* and *xyz* as like or unlike one another as they empirically prove to be. Is it not for this reason that "in the end," as Professor Lovejoy notes, "the sharpest contrast is set up by James himself between 'mental' and 'real' entities," when he says that " 'Mental fire is what won't burn real sticks; . . . Mental knives may be sharp, but they won't cut real wood . . . ,' " etc.? (p. 47). "Real" is evidently here used in its unmetaphysical plain-man contrast with "mental," and if real frogs and mental frogs should turn out to have properties or relations which render them more unlike one another than real frogs and real fiddles, there is nothing in James' view to indicate that such discriminable inequalities of contrast or difference would not be accepted. So far, James' "neutrality" is of a very relevant sort, relevant, namely, to a quasi-substantive view of consciousness derived from the traditional dualism that was inherent in the late nineteenth-century idealistic monisms.

IV

The same stroke of the pen that eliminated the two-world metaphysical dualism and the remnants of the substantive conception of consciousness had two other important results. First, by declaring that consciousness is "diaphanous," with the dropping of its transparent but stubbornly resistant metaphysical membrane, "awareness" was transformed into content, which was, in intent, at least, no longer subjective (apart from relations), being simply "experience" as given. But, second, the "unity of consciousness" central in previous idealistic theories of the knowledge relation, now became a function performed by experiences in certain relations. "Self" became autobiography.

It is at this point that James' neutralism ceased to be neutral by allowing prepossessions against the then regnant idealism to influence his professedly neutral "experience." For besides "awareness," which he had declared irrelevant to the distinction between thoughts and things, "consciousness" has been the *bearer* of *a type of relationship* made known *through* awareness. With the change

in the status of the latter the status of "consciousness," "subject," even of "introspection" is also altered, but the above type of relationship remains and is as significant as before, though no longer to be accounted for by (O. S.) subjective entities. By ignoring this unique and ubiquitous whole-determinative-of-part relation (alias "unity," "subject," and the like) which had been wrongly *referred to* subjective entities, James threw the weight of his new epistemological monism and would-be neutralism on the side of discreteness, discontinuity, and analysis. A less biased survey of the results accomplished by his preliminary thesis might have made a different story of Radical Empiricism.

For partial confirmation of the viewpoint here adopted we may refer to criticisms made by Professor Leighton from the standpoint of "Dynamic Idealism."[12] With Lovejoy and others he believes that James' theory "has an artificial simplicity," that he does not "lay the ghosts of the dualisms of mind and body, of thought and physical things, of immanent experiencing subject and transcendent object, which have annoyed philosophers for centuries." He agrees with James "to the extent that consciousness is a function of the individual organism." "Consciousness then is a function rather than an *entity* [O. S. Italics mine]. But I would insist that it is a function or attitude of a unique kind of entity in unique relations; namely a *self* or *subject*." Now, says Professor Leighton (after queries which can not be noted here), "whether one call consciousness a function, or something else, it *has* an 'inner duplicity,' which can not be evaded.

" 'In order that there should be an experience, it is not sufficient that qualities and relations should be or be there; it is likewise necessary that they should be in a recognizable and identifiable synthesis. The synthesis is an actual factor of experience.' "[13]

The above confirms the writer's opinion that James ignored an important and unique type of relation, made known *through* consciousness as the typewriter before me is made known *through* consciousness (whatever it be that in itself makes no difference to what is known), and which Leighton refers *to* consciousness and McGilvary speaks of as a *synthesis*. But since the present argument endeavors to move within the limits set by a Radical Empiricism which seems to issue from James' initial thesis, we can not have recourse to selves or to other entities *of which* consciousness is said to be a function. Concerning the "unique function," the "inner duplicity," and the alleged "synthesis" more will be said. There *is* a unique type of relationship, and there *is* an inner—at least a

[12] *Man and the Cosmos*, pp. 321–323.

[13] Quoted by Leighton (*ibid.*, p. 322) from E. B. McGilvary, in this JOURNAL, Vol. VI (1909), p. 250.

given—duplicity or polarity, but their loci are not necessarily *within* consciousness, rather, within the neutralizing solvent itself. James' term for the latter was, unfortunately as it turned out, "experience," which must, then, be the next topic.

V

In so far as the subsequent trend of (chiefly American) philosophy may be referred to James' Radical Empiricism the ambiguities that lurk in the concept of "experience" are in part responsible for the one-way tendency imparted by that empiricism.

(1) Certain of these ambiguities are scarcely to be avoided because of the many significations that attach to the term itself. Thus "immediate experience," however well intended as a neutral concept, has never been able to free itself from the charge of subjectivism. Between immediate experience as "what appears qualitatively and focally at a particular moment,"[14] and experience as "something at least as wide and deep and full as all history on this earth,"[14a] which seems to be Professor Dewey's present definition of the term, there is a whole gamut of meanings.

(2) A second type of ambiguity may be referred to Mr. James' own treatment of the concept. Thus "At times Mr. James identifies a pure experience with a peculiar subject-matter or stuff; it is of something which *antecedes* all reflection. . . . Contrast with the doctrine just laid down the following: 'The instant field of the present is always experience in its "pure" state, plain, unqualified actuality, a simple *that*, as yet undifferentiated into thing and thought, and only virtually classifiable as subjective fact or as some one's opinion about fact.' According to this passage, the experience in which a distinction is made between fact and opinion is itself, as a direct occurrence, 'pure' of the distinction: it is 'neutral' in reference to it."[15] This is the previously noticed distinction which Professor Dewey made between the ontological and logical aspects of James' neutrality concept. Does it not seem that James achieved his epistemological monism by using "experience" as a logically neutral concept to sweep away the old dualism and *then* employed "stuff," inconsistently hypostasized, as building material for a particularizing and atomizing theory of the knowledge relation?

Space is lacking for discussion of this point, but the following may afford indication of the trend of meaning here. Early in the "essay" which is before us James states the thesis "that there is

[14] John Dewey: *Experience and Nature*, p. 7.

[14a] *Ibid.*, p. 8.

[15] John Dewey: "The Concept of the Neutral in Recent Epistemology," this JOURNAL, Vol. XIV (1917), p. 162.

only one [italics mine] primal stuff or material in the world, a stuff of which everything is composed, and if we call that stuff 'pure experience,' then knowing can easily be explained as a particular sort of relation towards one another into which *portions of* [italics mine] pure experience may enter."[16] Later we learn that it was only "for fluency's sake" that he spoke of a *stuff* of pure experience and that "there is no *general* [*sic*] stuff of which experience at large is made. There are as many stuffs as there are 'natures' in the things experienced."[17]

These statements tread on the heels of the declaration that "neutral and simple 'pure experience' is *something we know not at all*" (italics mine), and are followed by the explanation that "it is made of *that*, of just what appears. . . ." Now if "pure experience" is something we know nothing about, save as "just what appears," how can it be so confidently asserted that it is "no *general* stuff" with the implication, later confirmed in the epistemology of Radical Empiricism, that the "natures" are particular (ontological) stuffs? For *what appear* are by no means always (if ever, except by the self-same postulation that "wholes" require) discrete natures. As Professor L. J. Russell suggests in an article that touches the Whole-Part problem, "What if there should prove to be no separable ultimate elements of things, and no whole of Reality [for our point, no general stuff] which imposes a character on all the partial wholes within it?"[18]

(3) The preceding suggests that certain of the ambiguities which attach to James' "experience" are not chargeable to the shiftiness of that concept, but to the well-known prejudices that James shared with others of the day in which he wrote—and would share with many to-day.

As a noticeable example, it will be recalled that (capitalized) "Experience" had played a leading rôle in the philosophies of Absolutism against which all other parties were beginning to nurse a grudge. Thus James himself, always ill-disposed toward Absolutism and all its works, missed or ignored what might be termed the "holistic" implications of a genuinely neutral "pure experience" or "bare indeterminate experienced given,"[19] deprived, as it should have been, of "stuff" both general and particular, and yielding only methodologically conceived and postulated "wholes" and "parts" in antithetical perspective or frames of reference. Also, by treating experience as if it had no *inner* (as complement and

[16] This JOURNAL, Vol. I (1904), p. 478.

[17] *Ibid.*, p. 487.

[18] *Journal of Philosophical Studies*, Vol. V (1930), p. 259.

[19] The qualifying words "bare indeterminate" were suggested by a term used by Professor F. S. C. Northrop in *Science and First Principles*, p. 256; *passim*.

methodological corrective of its outer) duplicity he lent initiative to the subsequently formulated theory of *external relations* to the entire exclusion of *internal,* and made to the rationalist only the pseudo-concession that relations (to be additively considered) are real.

There is no doubt that in James' hands idealism was thoroughly denatured, and there should be reason for idealistic complaint that something was effected as a war measure for which the method of arriving at Radical Empiricism did not provide.

VI

If we ask what that *something* was, the answer seems clear. The blow which idealism sustained at the hand of Radical Empiricism was not the stroke that severed from the parent trunk "consciousness," "self," "subject," "mind," etc., for these were only the limbs and great spreading branches of the tree. It was the stroke that, through the alleged neutrality of the "experience" concept, sought to destroy the roots of the tree from which, deep sunk in the soil of the "given," idealism had drawn its "unique relation."

To drop metaphor, the epistemology of idealism, which has of late made too many concessions and withdrawals, is not bound up with the fate of consciousness, self, and the like, however important these holistic concepts may be thought to be, but with a certain given relational frame of reference. For with the gradual progress of idealism since its nineteenth-century Romantic Period it has become increasingly evident that what was central in its treatment of the knowledge relation was not self or mind or "unity of consciousness," but a wholeness relation that emerges as directly from the indeterminate given as any punctual object.

But from the historic dualism had come *via* Kant an *alien* manifold. Hence the (from one whole-part perspective) genuinely ubiquitous "whole" became the ubiquitous "synthesis" which, under various aliases sought to engulf the manifold and account for the world in terms of creative Mind. Since Berkeleyanism had suggested a way of spiritualizing the universe and both religious and philosophic interest were thereafter enlisted in behalf of selves, the "unique relation" became exclusively an affair of some subjective entity, the constitutive character of which as such idealistic epistemology was never quite able to make good. Idealism, as we see it here, is basically an intuitionism. In each there is the same insight into wholeness, and with that insight epistemology must reckon sooner or later. For in a really radical empiricism the intuited whole is, aside from specific relations, no more subjective than the object perceived, contact of the organism with its environment being presupposed in the one case no more than in the other.

Closely following the article, "Does Consciousness Exist?" came "Radical Empiricism" (under which title the former was later incorporated), and the contexts were more fully provided for a new epistemology. This was seemingly adjudged the more important contribution and discussion turned to this without, as it seems to the writer, sufficient pause to consider in isolation the situation resulting from the initial step in the disposal of dualism. But if we view that situation in abstraction from the usual epistemological relations, and for purposes of examination drop references to antitheses between subject and object, even mind and physical things, as if they were not, the central principle of idealism appears in a new light. "If," as Sheldon has said, "consciousness is reduced to a relation or function of something else, that relation, etc., is still present and influential." [20] It is not something *to* which a "given" is presented, but itself *an aspect,* with more or less holistic import, *of* a neutral given. Translated into these terms, the idealistic persuasion (cravenly abandoned by many) [21] that presence in the knowledge relation makes a difference to the existential status of the thing known, now becomes the thesis that the "whole" is logically prior to and determinative of the "part," and that parts, externally related and additively considered, can never be brought together to make wholes of the "given" type. Thus a doctrine associated with idealism is its real foundation, as that which is basic to realism and not adjunctive is the proposition that parts are prior to and determinative of wholes. To this antinomy others, not here to be specified, reduce from the viewpoint of a radical empiricism and relativism, adequately provided with an honest neutrality concept.

But this is to anticipate some further examination of that situation resulting from James' "short and easy method for disposing of dualism," and that can not be undertaken here. At any rate, James, by his failure to recognize that the elimination of consciousness as awareness did not affect that which was basic to its supposed function, merely shifted the scene of conflict between empiricism and its hereditary foe, idealism, leaving that which was important in its epistemology intact, though neglected and soon to be obscured by the dust of other controversy. He did not play fair with his old enemy. This, we have said, in part accounts for those exclusively analytic and pluralistic tendencies that have since dominated the philosophies which hark back to James' insights. If this is true, we may at least entertain the thought that a reconstructed neutrality concept might substitute for the present asymmetry of methodological

[20] *Strife of Systems and Productive Duality,* p. 181.

[21] For example, "There are few idealists to-day," says Professor Hocking, "who would say that 'things owe their existence to being known." *Types of Philosophy,* p. 348.

values a recognized polarity of relational frames of reference, and place in altered perspectives both idealism and the philosophies of pluralism that have followed the one-way street to the limit.

There is here not the slightest disposition to discredit analysis[22] as the foregoing should indicate. By the one-way street the scientific and philosophical traveling public avoid much confusion. But if *all* signs point in but one direction, or if those which permit travel in the other convey the warning that in this direction lie only bog land, waste spaces, and dangerous encounters with an Error of Pseudo-Simplicity, it is easy to see that certain habitable localities will in time be depopulated while at other termini there will be congestion with which no regulations can cope. This appears to be the situation which some are facing to-day in several of the physical sciences. Perhaps it is the situation which Mr. Urban and others find in philosophy. Since he refers it to "a too thoughtless worship of radical empiricism,"[23] the homeopathic principle, popularized as "Like cures like," should be explored for a remedy.

C. V. Tower.

Ursinus College.

OUR CONSCIOUS STATES PICTURE AND APPREHEND OUR NERVOUS PROCESSES[1]

A Hypothesis

As all our theories of the interrelations of mind and matter are more or less unsatisfactory, it may be worth while to present a proposal that is new, as far as I know.[1a]

There is, I think, substantial evidence in support of the hypothesis to be proposed, and more plausibility in it than may at first sight appear, but I also place some reliance on its pragmatic service in solving some basic puzzles.

The Hypothesis

Various happenings outside the human body, acting through chains of intermediaries, stimulate processes in our nervous systems;

[22] Dread that such an attitude may become prevalent has even found its way into popular magazines. See, for example, P. W. Bridgman: "The New Vision of Science," *Harpers Magazine*, No. 946 (March, 1929), p. 451.

[23] "Modernism in Science and Philosophy," *Journal of Philosophical Studies*, Vol. V (April, 1930), p. 244.

[1] Owing to the recent death of Professor Mezes, proof of this article has not been read by the author.—Editor.

[1a] While I studied and taught philosophy and psychology for many years, I have done neither during the last two decades, and have, indeed, for the latter period, been able to read but few books and articles on the subject; my terminology may well be archaic.

various other happenings within the body similarly stimulate other nervous processes; and our nervous systems themselves spontaneously set up processes. There are thus types of nervous processes with three different origins going on in our nervous systems. Whether the hypothesis now to be set forth is concerned with processes in the entire nervous system, including sensory and motor nerves, only with processes in the brain and spinal cord, only with processes in the brain, or only with those in parts of the brain, need not be discussed. For convenience, I shall assume provisionally, and without prejudice to change if necessary, that the hypothesis is concerned with all nervous processes.[2]

The hypothesis I propose is, that our conscious states, our feeling, thinking, and willing, picture and apprehend, have a vague and blurred but serviceable knowledge of our nervous processes. Otherwise stated, our conscious states are undetailed replicas, imperfect but revealing motion pictures of our neural processes. Thus consciousness "sees" nerve impulses much as the impressionist painter sees field and forest; knows them much as we know the overtones in the notes of the bass viol.

The Evidence

The best presentation, and analysis, of evidence for the hypothesis with which I am acquainted is to be found in Dr. E. B. Holt's contribution to *The New Realism*,[3] though he, curiously enough, balks at the conclusion that follows, as it seems to me, all but irresistibly from his analysis. He does so for the reason, I suppose—at least I can find no other reason—that the conclusion runs counter to the main thesis of his *Concept of Consciousness*. But he draws from a rich scholarship, his analysis is sharp, and his reasoning very telling. Here I can give only a few extracts and some comments.

He adduces strong evidence, drawn from Sherrington, Rayleigh, and L. T. More, in support of the position that (in Sherrington's words) [4] "the number of separable excitatory states (impulses) engendered in a nerve-trunk by serially repeated stimuli corresponds closely with the stimuli in number and rhythm," and shows, after Brentano,[5] that our sensations are not mere simple unanalyzable qualities, but are complex entities, forming, in large measure at least, after familiar mathematical analogies, continua within modes, and even, though less completely and clearly, a continuum throughout

[2] It is possible that processes, or some processes in all living matter, especially in lower organisms, are involved. But this is not the place to enter into *that* discussion.

[3] Pp. 322–355.

[4] *The Integrative Action of the Nervous System*, pp. 42–43.

[5] *Untersuchungen zur Sinnespsychologie*, Leipzig, 1907.

the sense realm; and after this introduction, he comes down to the subject-matter here immediately pertinent. And first he gives a masterly analysis and exposition of the sensations excited by a series of light touch stimuli given at an ever increasing rate, which I wish I could transcribe in full. From the first a form-quality in all its uniqueness is experienced, consisting of at least the following interwoven elements, distinct taps, their succession, their rhythm, and their density (number of taps per unit of time), the last being the integral aspect of the quality. As the rate increases the form-quality changes steadily, and towards three taps per second its integral aspect *approximates* roughness, and begins to encroach on the tap sensations and the easy apprehension of their number. As the rate continues to increase, the apprehension of number of taps grows more and more difficult and is gradually replaced by the mere sense of succession, the apprehension of roughness, which has meantime become definite, growing *pari passu,* and encroaching increasingly; until, when the taps attain a density of about 600 per second, awareness or succession dies down, and the feeling of roughness has grown into a distinct quality "in its own right." As the "rate of tapping becomes still faster the quality of roughness changes continuously towards the quality of smoothness (just as in the spectrum red changes to yellow), until eventually it runs its gamut and becomes the steady quality of continuous touch."[6]

What this means should be plain enough. As Holt puts it,[7] "The experience of the tactual rhythm shows that time-division and number (Anzahl) of taps per time-unit are distinct though inseparable parts of the sequence, and that this *latter* feature *is* just the quality of roughness." I could ask no more. If Holt is right, and he marshalls a most impressive array of evidence, our hypothesis is established *for the case of roughness. It is* the density element as apprehended by us in a blurred way, in a tap series some 600 and more per second; time division, succession, rhythm, etc., having all dropped out, as Holt holds, because our time-sense is inadequately acute.

Next let us turn to audition and color vision, also discussed by Holt.[8] "The precisely parallel experience is to be had in the field of audition where a slow sequence of faint thuds or hisses passes over into a musical pitch. Here, too, there is a rate at which the sound sequence and pitch are experienced together, as distinct but inseparable. Here, too, careful scrutiny shows that the marked-off time-intervals are time perceptions, while the repeated hisses *are* the quality of pitch. . . . The parallel experience can be had in vision

[6] Holt, *op. cit.*, p. 345.
[7] *Op. cit.*, p. 345.
[8] *Op. cit.*, pp. 345–346.

where an intermittent color stimulus is seen with increasing rate of flicker. At first it is succession without the flicker quality, then succession and a form-quality of flicker, then less obvious succession and more distinct (form-) quality, then the quality of (rough) flicker, then the quality of smooth flicker, then the end. . . . The plain lesson of all these cases is that what we call secondary qualities are in truth form-qualities, simply psychic entities in temporal organization (rate of sequence) and we are tempted to view them as qualities instead of form-qualities because for all but the most absurdly low rates of succession the time sense is inadequate to its task. The successive 'aspect' is unperceived while the multitude 'aspect' (it might be by mere summation) gains on attention. The time-sense throws over its duty so preposterously early that it is no wonder that for the upper range of pitches and for all the colors every trace whatever of a form-quality should elude the introspection."

Thus we would seem to witness the very emergence into being of three types of sensation, to uncritical observation "simple" qualities, but in fact complex, roughness, pitches, and colors. The cases of chemically-excited sensations and of feeling and striving are not so clear. But they will no doubt fall into line if these three more difficult cases are adequately explained by the hypothesis, as they seem to be. Meantime introspection reports that sensations and ideas pass into associations and/or reactions; and histology reports that nerve impulses pass from nerve centers to nerve centers and/or into motor nerves. Here again conscious states picture nerve processes. Moreover, before the three sense series blur they picture the neural series with fair accuracy.

Sidelights

Holt, however, is not quite clear as to just *what* elements blur together, when our time-sense defaults, and appear in consciousness as sensations such as roughness, pitch, and color; at times he writes of them as nerve impulses packed tight in time, at others as elementary sensations (of which we are never distinctly aware) similarly organized. I think, however, we must conclude that the latter is his definite and deliberate opinion, for he says,[9] e.g., "I have not said, be it noted, that the density-factor of the nervous impulse is the secondary quality: it is the density of the series of some relatively primitive sensation which *is* the secondary quality" (italics his). In this view I am inclined to think him mistaken.

I am also compelled to differ from Dr. Holt when he writes,[10]

[9] P. 352.

[10] *Op. cit.*, p. 353.

"Consciousness, whenever localized at all . . . in space, is not in the skull, but it is 'out there' precisely wherever it appears to be" (italics his). And he quotes from Berkeley, with approval, "The rose is really red." To this, if I understand Holt, there are many answers, but I shall content myself with one. The incipient or complete default of our time-sense, itself based, no doubt, on some physiological defect, is, according to Holt's arguments, a condition precedent to the apprehension of color (or roughness or pitch). Is it conceivable that the rose has such physiological mechanism, or the sunlight and water vapor that stimulate in us the rainbow? And, of course, if I am right in holding that sense qualities are rough replicas of nerve processes set up by series of stimuli falling very rapidly on sense organs, these processes must be in the skull, or, at farthest, within the nervous system.[11]

But, I need hardly say, my criticism does not imply that we do not and can not "mean" and "know" the rose or its color, more or less accurately. We can and do mean and know outer objects themselves, not immediately, but mediately, by means of the familiar processes of representative perception, which is a corollary of the hypothesis under discussion. Nor does the criticism mean that the rose is not red, nor the violet blue, *for practical purposes.* They are and, as long as conditions are favorable, will be thus colored in the representation, the schematized pocket edition of the macrocosm, we carry around to help steer our course. But, according to the best scientific hypothesis so far established, i.e., to our best approximation to truth, the rose *itself,* the macrocosmic rose, is *not* red, nor the violet blue.

When I was a student of philosophy and psychology, it was commonly said that material objects occupied both space and time, while mental states occupied time only. My own introspection has always contradicted the latter statement. As I write, my mental processes are certainly not going on in the Island of Yap; they are proceeding in Tucson, Arizona, before and above a certain desk. Moreover, I am distinctly aware of my *thinking* as proceeding in and about the upper part of my brain, and I am inclined to say that it has some bulk. As to sensational experiences, my general sensibility is undoubtedly bulky, and the shape and position of my body, in a vague and clumsy way; the minor special sensibility clearly is, at least, located; touch is located and is extended; while sight is stereoscopic, and appears to penetrate far beyond the body surface as represented in consciousness. Indeed sight and touch and locomotor sense (sense of successive positions) hold to-

[11] In this criticism I feel on shaky ground, only, however, as to my interpretation of Holt's *Concepts of Consciousness,* which it takes more time than I can command to understand.

gether as a garment and its lining, in fact coincide spacially. The whole inner scene seems to be a microcosm, more or less accurately representing and corresponding to the macrocosm that contains and surrounds me. And it is the microcosm that we sense; the macrocosm is only inferred, except in the case of surface touch. If the experience of others confirms mine, all this supports rather than opposes the hypothesis.

Nor is it true that the hypothesis merely accentuates and slightly extends parallelism. It insists that the psychic, because of parallelism, gives a serviceable and significant knowledge of the physical; immediately of our nervous processes, mediately of the outer world that our nervous processes ape; indeed this is the *only* knowledge we have of the outer world; even when it takes the form of physical science it is of this type.

Pragmatic Evidence

I believe the hypothesis, with an addition to be set forth presently, can be shown to work, to be useful. The whole of our mental activity, the whole of our practical life, is based on the assumption, irresistible, except in our deliberate and determined sophisticated moods, that outer and inner bodily happenings affect and stir up our *mental* processes, and that these processes, feeling, thinking, striving, willing, stimulate and guide our bodily action, and thus affect things without us,—that it is *these* human powers that have transformed crude nature, and surrounded us with the marvelous and stupendous creations of civilization. If we really denied these basic assumptions, *if we acted as if they were false,* all mental activity would cease, all intelligent bodily action would cease, with death in the near offing, all scientific thinking would cease. Of course we do nothing of the kind. We give lip service to the denial, and go on acting as if it were not.

And yet there is no scientifically entertained hypothesis that squares with our irresistible belief and our universal practice. On the contrary, as scientific thinkers, we are only entitled to deny either body or mind, or call one of them illusory; or else to adhere to the sophisticated absurdity that mind is an ineffective epiphenomenon, or that the two run ever parallel, with "No thoroughfare across" written over them! I am unwilling to subscribe to this resourceless bankruptcy of thinking. Far better to give mental hospitality, and a fighting chance, to any theory that offers a way out of this impossible *impasse.*

Matter is, of course, something more than electric charges. Montague calls the "something more" its "inner being," C. A. Strong its "private life"; it might also be called an uncommuni-

cated complement, as the chain of causes through which matter affects our senses is not so fashioned as to carry any information concerning its nature. *But this inner being of electric charges, and of their combinations and recombinations can, I hold, most naturally and helpfully be so conceived as to enable it to combine into and form the conscious life we experience.* This is the addition promised above, and it is a tall order no doubt. But why not? Matter, as outer reality, in an early phase made up of electric charges, combines and recombines till it forms our bodies. Why should not the inner aspect of these energetic charges build up into our energetic minds and spirits? Is not that, with our present knowledge, a very good way of accounting for our minds and selves?

This, then, would seem to be the picture. The concrete fact is mind-matter. Either without the other is as unreal as the grind without the cat. And coëxisting continually as one undivided concrete entity it would seem that there must be interplay between them; catalysts furnish an analogy. Once admit that mind apprehends physical processes and the alleged chasm is bridged, and mind can as easily *affect* matter. In our own case, speaking roughly, matter gives mind its data, mind gives matter its direction.[12] If mind had been useless, in place of varying concommitantly with matter, evolution teaches that it would long since have been sloughed off. What the interplay may be in the case of simpler, especially of inorganic entities, it would at present be bootless to surmise. But on the basis of the hypothesis, and the addition herewith presented the view of the interplay between mind and matter we always in fact practically hold to is justified and explained.

However opposed it may be to certain preposssessions, natural or artificial, the hypothesis under discussion does offer a way out. As long as mental processes are obtruded from the world of real objects, into an insulated world of their own, there can, of course, be no commerce between the two; matter *must* be blind, mind ineffectual. But suppose that the alleged abysmal difference between them is based on oversophistication, that it is an exaggeration, a reification of their undoubted and important differences; suppose that mental processes are an integral part of the real world, and that they constantly catch neural processes in the very act of feeling, thinking, or striving; "see" them vaguely, to be sure, but definitely enough to distinguish

[12] J. S. Haldane, in a letter to the London *Times*, May 6, 1929, puts it this way: "The whole of what on a superficial and partial view, may appear as mere physical or chemical mechanism in a living organism is found to be integrated or coördinated in a manner of which there is, and can be, no mechanical explanation; and it is here that biological interpretation differs essentially from mechanical interpretation." Coördination of course implies striving and purpose.

and take in the countless phases and shadings consciousness reveals—then our irresistible belief and our universal practice come into their own. We are no longer paralyzed with the obsession, that our feeling, thinking, and willing may be but the play of ghosts with shadows. The whole scene springs into life. The body is a-tingle with sensations stimulated from within and from without; and on the basis of these sensations, mind feels, considers, and has a part in deciding and determining bodily action. Indeed, mind, spirit, guides and dominates; the body is led and controlled. We men see before and after, think and act in the real world, just as we have always seemed to do.[13]

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BOOK REVIEWS

A Modern Introduction to Logic. L. S. STEBBING. New York: Thomas Y. Crowell Co. 505 pp.

It is extraordinary how logic, despite the thinness of its content as presented in the average textbook, has held its place in university education from the Middle Ages onward. Logic has been tenderly, reverently, almost superstitiously preserved, and passed on from the hands of one generation of university dons to the next, in almost exactly the form that Aristotle gave to it. As in the Middle Ages, logic is still a sort of philosophic ritual through which every initiate into academic philosophy must pass: he must be baptized in the name of the syllogism and the three laws of thought. And to the layman, logic holds some mysterious, remote promise of "how to think properly."

But what teacher, and what student, has not experienced his hour of bitter disillusionment over it all? No matter how one may embroider on the logic of the past, no matter how one may inflate it with religious, metaphysical, psychological, sociological, or scientific ideas, it all comes down to a few poverty-stricken principles, which present no real picture of the richness of the forms of thought, and which everybody knew already without going to the trouble of studying logic. It has always been the side-dishes—religious and moral advice in the case of the famous "Port-Royal Logic," cosmological speculations in the case of Hegel and the English idealists, psychological observations in the case of the pragmatists—which have supplied the real meat in books on logic. The main course

[13] The hypothesis here presented is similar to that penetratingly set forth in C. A. Strong's *Why the Mind has a Body*, as I remember it. But his book is unfortunately out of print, and at this distance I can not lay my hand on a copy for exact comparison.

itself has consisted of such bare bones as "Socrates is a man, men are mortal, therefore Socrates is mortal"—or "if all men are mortals, some mortals are men." The academic dust lies heavily on logical textbooks, and there is only one way of blowing it away: to let in the fresh air of modern logical ideas, which are the products of the last seventy-five years and which are now only beginning to trickle down into textbooks. I refer to the quasi-mathematical developments of logic, beginning with George Boole in the middle of the last century, and extending through the work of Peano, Frege, Peirce, Schröder, Whitehead, Russell, and others, down to the present day.

Miss Stebbing's *A Modern Introduction to Logic* is therefore a highly valuable book, for it presents to the elementary or intermediate student this newer and more vital logic. The book falls into three parts, the first dealing with formal or deductive logic—beginning with a discussion of language and symbolism, passing on to the study of propositional relations, the syllogism, compound arguments (hypothetical and disjunctive, dilemmas, and so on), to the more general ideas of the modern logical calculuses of propositions and classes, and closing with a general chapter on inference and implication. The second part discusses scientific method and induction; and the third part, certain miscellaneous aspects of logic—definition, abstraction, persuasion and conviction—ending with a brief sketch of the history of the subject. The author declares in the preface that her purpose in writing the book was "not to take the student very far into mathematical logic, but only to enable him to realize that the principles of symbolic logic . . . are exemplified in everyday reflective thinking no less than in mathematical deductions. I have not sought to write an *introduction to symbolic logic;* my purpose has been to emphasize the connection between Aristotelian logic and symbolic logic, and thus to write a text-book which will include as little as possible that the student has subsequently to unlearn, or for the teaching of which the modern logician feels it necessary to apologize."

The book is not easy. Perhaps it is impossible to present modern logic in a form that would make it suitable for students who have not read a moderate amount of philosophy. Yet the teacher of an intermediate course in logic would do well to discard his more antiquated texts for this one. It leads the student immediately into the stream of contemporary logical ideas without unnecessary detours into the past, and avoids all sorts of questionable philosophical side issues for logic itself. Miss Stebbing has the gift of clarity, she knows the subject, and puts her points—in most places—with extraordinary acuteness.

The author is steeped in the "Cambridge school" of logic, the works of Russell, Whitehead, Broad, Johnson, Moore, and, of course, much of the most important work has come from this school in the last twenty years. But whether this immersion in the extremely technical and sometimes very special discussions of the Cambridge logicians has been an advantage to Miss Stebbing in giving a synoptic view of logic is a question. Where she breaks away from these discussions, as in the second part of the book, and in the first two chapters, she is at her best as an introductory writer, and presents the ideas in a way that would cause them to penetrate beneath the skin of the intelligent upper-class student. But in other parts of the book, those that deal specifically with mathematical logic, she seems to me to have given an excellent critical account of these Cambridge logical discussions—which are important contributions to contemporary philosophy—at the expense of the simpler, more elementary aspects of symbolic or mathematical logic. Thus the book has a sort of double personality: in places it is clear, concrete, and really a textbook for the more intelligent upper-class university student; and in other places it is technical and highly special in its choice of topics—and really a summary and criticism of the debates of the Cambridge logicians.

For instance, she introduces modern logic through the study of descriptions, expressions of the form "the author of Waverly," and devotes many pages to the subtle question as to how these phrases can have meaning when there is no object to which they refer, and as to why they are "incomplete symbols." But when she arrives at the center of the subject, at the calculus of propositions and classes, she omits to show how the theorems are derived from the primitive propositions; that is, omits the whole question as to how logical propositions are "proved" with reference to one another. This is unfortunate, and causes her exposition of the central portions of symbolic or mathematical logic to be truncated. Nor does she discuss at any length the important question of the relation between these two calculuses, of propositions and classes; in fact, she uses a symbolism which confuses rather than distinguishes them.

It is no easy task to present modern logic, first of all because the essential ideas must be separated from the subtle, debatable issues by which they are surrounded in the works of writers such as Whitehead, Russell, and Johnson. It is very easy to get lost in bypaths, and one needs a strong sense for the main road. In *Principia Mathematica,* the bible of modern logic, the topic of descriptions and incomplete symbols is important because the authors wish to avoid the assumption of classes, in their "deduction" of pure mathematics from pure logic; but this is a very special point.

Again, in the chapter on Inference and Implication, I get the impression that the author has been led astray into a discussion of her points of agreement and disagreement with Russell, Johnson, Moore, and others, and has forgotten her primary purpose—to present the elements of the subject to the student. The discussion here, as in the case of the theory of descriptions, is legitimate and intelligent enough, but its effect in a textbook is to throw the material into wrong proportions. For instance, following Johnson's notion that inference has "epistemic" as well as "constitutive" conditions, she says that when q is inferred from p, p must be known to imply q without its being known that q is true. According to this theory, no inference could be performed twice over, unless it had been forgotten in the meanwhile; nor could an inference which "explained" a given proposition be a real inference. If I have a bad pain in my head, and then suddenly remember that I stayed up late last night smoking cigarettes and talking; hence, that I have a bad pain in my head, this is not an inference. I miss also, in this chapter, any reference to "intensional" logical relations, though Moore's "entailing," which is obviously intensional, is considered.

Miss Stebbing naturally sees the defects in the older logic and exhibits its thin, artificial quality. Yet she is well balanced in her judgment of it. She says, "throughout the book emphasis is laid upon the continuity of some of Aristotle's doctrines with those of the mathematical logicians." It would be easy, but not profitable, in a review of any book on logic to pick out small points of disagreement. After all, logic is a growing science; new blood has been infused into its veins—and everything growing is uncertain of itself. University teachers can be thankful to Miss Stebbing for having given them a textbook that is alive, not by virtue of extraneous material that has nothing to do with logic, but through the new free spirit which has entered logic itself in the present day.

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Erkenntniskritische Grundprobleme der Relativitätstheorie, Quanten und Wellenmechanik. ERHARD BRÜLL. Breslau: Otto Borgmeyer. 1929. Pp. 66.

Dr. Brüll's little volume of sixty-odd pages, printed with generous margins all round, is a somewhat frail underpinning for the impressive, not to say staggering, title it bears, and for a table of contents which lists a preface, an introduction, five chapters and a conclusion. As one might suspect from the unbalance of these proportions, it can not do more than make the most cursory mention of any of the problems it promises to discuss. Its avowed purpose is

to examine the remains of Kantian, Neo-Kantian, and Neo-realist epistemology in the light of the new physics. To this end the author gives us twenty-six pages of the briefest notes on very profound theoretical matters such as the curvature of space, the relation of gravity to electricity, the geometrical interpretation of forces, contemporaneousness, the constancy of light-velocity. His statements are so laconic that they bear somewhat the character of personal memoranda. Here is the beginning of a typical paragraph:

> The general theory of relativity, through the attempt to combine gravitation and electricity in a single metric system of the four-dimensional continuum, has suffered a reformulation at the hands of Weyl, Eddington, and Einstein. Though this combination was not attainable through Riemann's geometry, the way was opened by a further development of the latter. The newly added invariants and tensors are to be tested for their scientific value, i.e., we must inquire to what extent it is possible, by means of the mathematically more intricate geometry, to embrace the laws of the gravitational and electromagnetic fields.

Such a catch-word review might suffice to bring all sorts of things to the mind of a physicist, but to the reader for whom the book is intended it is perfectly meaningless. Dr. Brüll states in his preface that he has avoided mathematical formulae and employed common language in their stead in order to make the book accessible to readers not versed in higher mathematics. Evidently he shares in a very prevalent opinion that the esoteric character of mathematics lies entirely in its symbolism, not its concepts. This is, indeed, a common belief; hence the deluge of "popularizations" of Einstein which strains the contemporary book-mart. Mathematicians, presumably, use algebraic symbols to express propositions which could just as well be stated in plain language, because they—the mathematicians—enjoy the tang of added difficulty. To me it seems simply preposterous that a person incapable of reading algebraic symbols should be able to attach any significance whatever to the paragraph quoted above. What can the references to Riemann's geometry and its short-comings and later modifications mean to him? What does he know about metric systems, old or new? And what meaning is he likely to attach to the "pseudo-Euclidicity" discussed on p. 23, or the "elimination of the gravitational field"?

Now, leaving aside these serious faults of presentation, let us see what philosophical implications of the new physics the author would call to our attention. After his somewhat stenographic inventory of the new physical concepts, he runs through an accurate analysis of these concepts into their logical presuppositions and their empirically dictated modes. The upshot of his reflections is that the essence of Kant's epistemology (an essence presented in greater purity by the Neo-Kantians) is not incompatible with modern

physics. His distinctions are clear and correct, and the moral he draws seems to be sound. There is, however, nothing new in it; it has been stated by Natorp, Cassirer, and others; there really seems to be no reason for writing another book about it, unless it be a great and detailed work running back each concept to all its ramifications in logic and mathematics.

Dr. Brüll's little exposition is a defense of old concepts rather than an exploration of new ones. His title is misleading; he is not concerned with the epistemological problems of Relativity, Quantum-theory, etc., but with the epistemological problems of traditional philosophy *in spite of* Relativity and all its various relatives. His theories are not born of modern science, but are adapted to it. He has kept his epistemology and accepted the new physics, as we keep the Old Homestead and put in the modern plumbing. In a well-built house, this can be done; whether or not it is worth doing, is a matter on which the Old Homesteader and the plumber may legitimately hold diverse opinions.

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Hinduism Invades America. WENDELL THOMAS. New York: The Beacon Press, Inc. 300 pp.

In a concise, clear style, not always free from irony, Doctor Thomas gives an account, historical and factual, of the entrance and spread of Hindu ideas in America. Individuals and movements are studied, the methods used by the various cults are described, and the effects of these efforts are appraised. The result is an informing study and one that will assist the reader in forming an estimate of the situation with reference to "invading" Hinduism. The author shows considerable skill in stating principles and teachings in summary fashion. While such procedure has its faults, still, it is exceedingly useful in such a case as this. Bearing this last sentence in mind, the second chapter, "Classic Vedanta, the Essence of Hindu Faith," is to be commended.

The chief types of the active promotion of Hindu thought in America are: (1) that which is best known through the fame of Vivekananda, representing the Ramakrishna movement and Vedanta philosophy; (2) that which centres about Yogananda's "practical" cult; (3) various cults, cultural movements, the work of Hindu lecturers, professors and students, and of non-Hindu propagandists, none of which are of great extent and all of which are largely independent of each other; and (4) the influence of the universities where Indian studies are carried on, and, largely in prospect, of the International School of Vedic and Allied Research.

Doctor Thomas gives considerable attention to the influence of Indian thought upon European philosophy from the most ancient times. From the point of view of his main thesis, the case is overworked.

The author explains this Hindu movement into the West from two points of view. First, "a world-wide struggle for cultural influence is now taking place." Moreover, "this modern expansion of Hinduism is just part of the great modern awakening of Asia." And, in the second place, he quotes a Hindu, J. S. Rao: "The Western frame of mind is so peculiarly promising for the reception of Indian ideas," that "it will be our own mistake if we do not make India the teacher of the West as it has already been of the East." The writer goes on to say: "The presence of Hinduism in America in the form of purely religious organizations is due primarily to the desire of certain American Christians for deeper and wider knowledge of the world's religious thought. The Hindu preachers in the United States are not so much missionaries as 'inductionaries.' The stimulus is American, the response Hindu. . . . The swamis come to America because of Christianity and Western culture rather than because of Hinduism of Eastern culture."

Doctor Thomas gives three reasons for the persistence of Hindu cults in America: their claim of universal authority, which is both novel and supreme, consequently very impressive; their cultivation of the individual rather than society, with emphasis upon self-culture and meditation; and their insistence on the essential oneness of the individual with God, which is universally satisfying.

Of the membership of the Ramakrishna movement in America, the author's investigation shows that "almost all of the group were religious wanderers, restless souls who passed through many 'borderland' cults till they found Vedanta. And half of the few church members who joined the Hindu cult without wandering, have now left their churches, in spite of the fact that Vedanta demands no severing of former church connection, and even claims to support all cults and sects." And he says further: "In the Vedanta group two kinds of people are prominent: those who have just broadened their views, and those who have adopted the Vedanta cult as their very own. We meet with the same two kinds in Yogoda, with the addition of a third, which is still actively Christian. Thus in the Yogoda Sat-sanga Society of America we have three classes: orthodox Christians, pure Yogodans, the spiritual pilgrims who have wandered through the 'borderland' cults, such as Theosophy, Christian Science, New Thought and Unity. Both Vedanta and Yogoda have much in common with these American cults, but Vedanta harks back to conservative Hinduism, while Yogoda leans forward toward liberal Christianity."

The study forces the conclusion that none of the types of movement noted above, except the fourth, represents anywhere near a thoroughgoing presentation of Hindu thought, either Vedanta or Yoga, but well diluted, Americanized modifications of it. In the second place, the book provokes the question whether these movements constitute an invasion. Aside from the fourth type of activity outlined above, which after all is but a mild form of infiltration, the better description for these activities would be "forage." Lastly, the impression is left that heretofore the extent and effectiveness of Hindu propaganda in America have been overestimated.

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JOURNALS AND NEW BOOKS

THE MONIST. Vol. XLI, No. 4. World Geometry: *V. F. Lenzen.* Relativity and Reality: *O. L. Reiser.* On the Nature and Analysis of Causality: *E. T. Mitchell.* John Cook Wilson's Doctrine of the Universal: *R. Lloyd Beck.* The Nature of Universals and of Abstractions: *D. C. Williams.* The Meaning of the Notation of Mathematics and Logic: *H. N. Lee.* Physicalism: The Philosophy of the Viennese Circle: *Otto Neurath.* Discussions. Art and Beauty: *D. W. Gotshalk.* Ambiguity in Functions and Propositions: *A. P. Ushenko.*

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NOTES AND NEWS

The New Orient Society of Chicago under the auspices of the Open Court Publishing Company announces the publication of twelve monographs on modern Oriental culture beginning January, 1932, and continuing bi-monthly for two years, as special numbers of the *Open Court* magazine. The editorial committee is as follows: Miss Elizabeth Carus, editor of the *Open Court;* Dr. Berthold Laufer, Field Museum of Natural History; Professor Albert H. Lybyer, University of Illinois; Professor A. T. Olmstead, University of Chicago; and Professor Martin Sprengling, University of Chicago. These monographs will deal with relatively modern cultural development of the Orient, meaning Asia and related adjacent territories, e.g., Moslem North Africa and a large part of Malaysia.

Those who are desirous of becoming members of the New Orient Society of Chicago are invited to apply for particulars of purposes and privileges of membership to the Secretary, care of the Open Court Publishing Co., 337 East Chicago Avenue, Chicago, Illinois.